SCHOOL OF ENGINEERING AND COMPUTER SCIENCE

General Information

Vision

Advancing as a premier School of Engineering and Computer Science in research and education with a commitment to Christian values.

Mission

- Educate and train future engineering and computer science leaders with a Christian worldview
- Discover new knowledge for worldwide impact
- Engage worldwide communities through scholarship and service

Accomplishing the mission of the School of Engineering and Computer Science will:

1. Produce graduates with
   - a broad-based technical education and research experience in engineering and in computer science, capable of thinking clearly, being creative, and communicating effectively
   - professional ethics and a sense of civic responsibility, becoming leaders in their churches, their communities, and society
   - an appreciation for the role of the sciences and humanities in society and a commitment to Christian values
2. Positively influence the world with discovery of new knowledge and engagement through strong alliances with industry, the corporate community, and government.

History

In 1973, the first computer science faculty member joined the Department of Mathematics to teach and develop programs in computer science. By 1974, the Department of Mathematics offered both the Bachelor of Science and the Bachelor of Arts degrees in computer science. By 1980, the Computer Science Program in the Department of Mathematics was combined with the Engineering Science Program in the Institute of Engineering Science to form the Department of Engineering and Computer Science.

The School of Engineering and Computer Science was established in 1995 with two departments, the Department of Computer Science and the Department of Engineering. In 2001, EAC/ABET granted separate accreditation to the Department of Engineering's three baccalaureate programs: Electrical and Computer Engineering, Mechanical Engineering, and Engineering. By 2005, the Department of Engineering was reorganized into the Department of Electrical and Computer Engineering and the Department of Mechanical Engineering. Within the next ten years, Ph.D. programs were added to Computer Science, Mechanical Engineering, and Electrical and Computer Engineering, and the General Engineering major was restructured and enhanced to include the choice of four concentrations (biomedical, geo-petro, environmental, and humanitarian engineering) and a minor option.

Since 2001, numerous concentrations have been added to the baccalaureate programs, expanding opportunities for students to specialize in emerging fields. Additionally, a Bachelor of Science in Computer Engineering and a Bachelor of Science in Aerospace Engineering were created to meet industry demands and student interests. The School of Engineering and Computer Science continues to evolve, consistently exploring new programs and initiatives to stay at the forefront of technological innovation.

Course Repetition

Students taking a course in the School of Engineering & Computer Science will have a maximum of two attempts of any one ECS course to fulfill a prerequisite or requirement for a degree, major, or minor. An insufficient earned grade or receiving a "W" notation counts as an unsuccessful attempt. A course receiving a "W" notation for a semester in which the student withdraws from all courses is not counted as an unsuccessful attempt. Additional attempts will not be granted except by permission from the student's Dean (or his/her representative).

Class Attendance Policy

Class attendance is expected at all regularly scheduled course sessions. Faculty members may choose to have class attendance requirements and may also establish penalties for excessive absences or tardiness. The department chair and dean will endorse the attendance policies outlined in the instructor's syllabus. If an absence is unavoidable, due to a university-sponsored activity, illness, accident, or death in the family, students are expected to make advanced or immediate contact with the faculty member to decide when to complete scheduled assignments and coursework.

Academic Advisement

To complement the mentoring provided by faculty, students are required to meet with a professional staff advisor each semester before registering for classes. ECS advisors monitor students' progress toward graduation and provide appropriate referrals. An advisor will review each student's academic progress along with student success resources and discuss course recommendations for the upcoming semester. Starting in the student's third year at Baylor, students must submit their graduation plans for review by their advisor.

Accelerated Bachelor's/Master's Program

The Accelerated BS/MS Program option is now available to Baylor University undergraduate students pursuing any of the following degree programs: BSAE, BSCE, BSCS, BSE, BSECE, BSME.

This program enables currently enrolled undergraduate engineering students who apply and are admitted to a master's program in the School of Engineering and Computer Science to select up to six hours of coursework taken at the graduate level to simultaneously fulfill elective credit in their undergraduate and graduate programs of study. The MS programs of study remain the same.

By enabling dual credit for those courses, students can accelerate their MS program of study to complete it in one year. Students graduating from

one of the approved Baylor ECS degree programs are eligible to apply for the ECS Dean's Graduate Scholarships for Master's level coursework, resulting in a cost per credit hour comparable to the rates at public universities in Texas.

Students interested in the Accelerated program should submit the Accelerate Program Interest Form (https://grad.baylor.edu/register/accelerated_program/) when they are no less than 2 semesters away from graduation.

Engineering Licensure (P.E.)

The engineering faculty encourages students to seek licensure as professional engineers (P.E.) during their careers. Before graduation, students are encouraged to take the National Council of Examiners for Engineering and Surveying's (NCEES) Fundamentals of Engineering (FE) exam. This test, a comprehensive knowledge exam given nationally, is the first step toward professional licensure. Baylor engineering seniors have had an excellent pass rate for this exam.

ABET Accreditation

The Bachelor of Science in Computer Science (B.S.C.S.) degree program is accredited by the Computing Accreditation Commission of ABET.

The following degree programs are accredited by the Engineering Accreditation Commission of ABET (http://www.abet.org):

- Bachelor of Science in Electrical and Computer Engineering (B.S.E.C.E.)
- Bachelor of Science in Engineering (B.S.E.)
- Bachelor of Science in Mechanical Engineering (B.S.M.E.)

The Bachelor of Science in Computer Engineering (B.S.Cp.E) and the Bachelor of Science in Aerospace Engineering (B.S.A.E.) have been designed to align with ABET accreditation criteria and will be eligible for review following the graduation of their first class.

School of Engineering and Computer Science Leadership

Dean's Office

Name	Title
Daniel J. Pack, Ph.D.	Dean
Anne Spence, Ph.D.	Associate Dean for Academic Affairs
Alexandre F.T. Yokochi, Ph.D.	Associate Dean for Research and Graduate Education
Ida Jamshidi, Ed.D.	Assistant Dean of Student Success
Lauren Muhl, M.A.	Assistant Dean of Operations

Computer Science Department

Name	Title
Jean Gao, Ph.D.	Chair
Bill Booth, Ph.D.	Associate Chair
Eunjee Song, Ph.D.	Graduate Program Director

Electrical and Computer Engineering Department

Name	Title
Jeong Bong (JB) Lee, Ph.D.	Chair
Scott Koziol, Ph.D.	Associate Chair
Keith Evan Schubert, Ph.D.	Graduate Program Director

Mechanical Engineering Department

Name	Title
Paul Ro, Ph.D.	Chair
Jill Patterson, Ph.D.	Assistant Chair
Stephen T. McClain, Ph.D.	Graduate Program Director

Foreign Language and Culture Distribution List for ECS

Code	Title	Hours
Language Course Options		
Higher-level proficiency in the language options listed below will also fulfill the foreign language and culture requirement.		
ARB 1301	Introduction to Arabic	3
CHI 1301	Elementary Chinese	3
FRE 1301	Elementary French	3
GER 1301	Elementary German	3
GRK 1301	Elementary Greek I	3
HEB 1301	Introductory Hebrew I	3
ITA 1301	Elementary Italian	3
JPN 1301	Introductory Japanese	3
KOR 1301	Elementary Korean	3
LAT 1301	Elementary Latin I	3
POR 1301	Elementary Portuguese	3
RUS 1301	Elementary Russian	3
SPA 1301	Elementary Spanish	3
SWA 1301	Elementary Swahili	3
CSD 1305	American Sign Language I	3
Cultural Competency Course Options		
ARB 2320	Arabic Popular Culture	3
AST 2380	The Peoples and Culture of Asia	3
AST/HIS 3305	Traditional China	3
AST/HIS 3307	Modern Japan	3
AST 4388	Contemporary Chinese Society and Culture	3
BIC 4374	World Cultures V: Differing Visions and Realities	3
CHI 2320	Intermediate Chinese for Communication	3
CHI 3305	Chinese for Business I	3
CHI 3306	Chinese for Business II	3
CHI 3310	Chinese Language and Culture through Films	3
CLA 3301	Roman Republic	3
CLA 3302	Greek History and Civilization	3
FAS 1311	Freshman Academic Seminar: Modern Languages, Cultures, and Global Communities	3
FRE 2320	Passport to the French-Speaking World	3
FRE 2321	French for Health Professions	3

FRE 3301	Advanced French Grammar	3
FRE 3302	Conversational French	3
FRE 3308	French and Francophone Pop Culture	3
FRE 3310	Introduction to French Literature	3
FRE 3330	Introduction to French Cinema	3
FRE/FDM 4330	Survey of French Cinema	3
GBL 1101	Developing Intercultural Competence	1
GBL 1102	Intercultural Competence Abroad	1
GBL 1103	Reentry From Study Abroad	1
GER 2320	German for Modern Life	3
GER 3301	German Conversation and Composition	3
GER 3341	Introduction to German Culture: Germany in the Making	3
GER 3345	Introduction to German Film: German Culture from Berlin to Hollywood	3
GRK 2320	Intermediate Greek Poetry	3
HEB 2320	Intermediate Hebrew II	3
HIS 2381	Introduction to Slavic and East European Studies	3
ITA 2320	Pathways in Italian Culture	3
ITA 3301	Advanced Italian Grammar	3
ITA 3302	Italian Conversation, Reading, and Composition	3
ITA 3310	Introduction to Italian Literature	3
ITA 3330	Italian Through Film	3
JPN 2320	Exploring Japan	3
JPN 3301	Advanced Japanese I	3
JPN 3302	Japanese Culture through Reading	3
JPN 3305	Japanese for the Professions	3
JPN 3306	Japanese Cinema	3
JPN/THEA 3352	Japanese Theatre and Culture	3
KOR 2320	Intermediate Korean II	3
LAS 2301	An Introduction to Latin American Studies	3
LAT 2320	Intermediate Latin Poetry	3
LING/ENG 3319	Language and Culture	3
MES 2301	Introduction to the Middle East	3
MUS 3321	Music in World Cultures	3
MUS 4361	Traditional Music and Culture in Africa	3
MUS/AST 4362	Traditional Music and Culture in Asia	3
MUS/LAS 4364	Traditional Music and Culture in Latin America	3
PHI 4331	Latin American Philosophy	3
PHI 4341	Contemporary Continental Philosophy	3
POR 2320	Exploring the Portuguese-Speaking World	3
PSC 3315	Fundamentals of International Politics	3
PSC 4303	International Human Rights	3
PSC 4304	Governments and Politics of Latin America	3
PSC 4305	International Law	3
PSC 4314	Government and Politics of Mexico	3
PSC/AST 4325	Asian International Relations	3
PSC 4334	Governments and Politics of the Middle East	3
PSC 4344	Government and Politics of Russia	3

PSC 4365	International Political Economics	3
PSC/AST 3314	Politics and Problems of Developing Countries	3
PSC/AST 4364	The Governments and Politics of the Asia-Pacific Region	3
PSC/AST 4374	Governments and Politics of East Asia	3
REL 4343	Topics in Islam	3
REL 4347	Topics in African Religions	3
REL 4348	Modern Judaism	3
REL/AST 3345	World Religions	3
REL/AST 4346	Topics in Asian Religions	3
RUS 2320	Russian Culture in Context	3
RUS 3301	Russian Conversation and Composition	3
SEES/HIS 2380	Introduction to Slavic and East European Studies I	3
SOC 3318	Mexican-Americans in U.S. Society	3
SPA 2304	Intermediate Spanish for Heritage Speakers	3
SPA 2320	Exploring the Spanish-Speaking World	3
SPA 2321	Intermediate Spanish for Health Professions	3
SPA 2322	Spanish for Christian Ministry	3
SPA 2324	Spanish for Business	3
SPA 3302	Conversation and Composition	3
SPA 3309	Introduction to Spanish Language and Linguistics	3
SWA 2320	Intermediate Swahili II	3

ECS Degrees

- Computer Science and Informatics (https://catalog.baylor.edu/undergraduate/school-engineering-computer-science/computer-science-bscs-informatics-bsi/)
- Engineering (https://catalog.baylor.edu/undergraduate/school-engineering-computer-science/engineering/)

ECS Minors

All students pursuing an ECS minor should be advised by the School of Engineering & Computer Science to ensure they are completing appropriate courses for the minor. Exclusions may apply to electives.

- Computer Science Minor (https://catalog.baylor.edu/undergraduate/school-engineering-computer-science/ecs-minors/computer-science-minor/)
- Data Science Minor (https://catalog.baylor.edu/undergraduate/school-engineering-computer-science/ecs-minors/data-science-minor/)
- Engineering Minor (https://catalog.baylor.edu/undergraduate/school-engineering-computer-science/ecs-minors/engineering-minor/)